



Express Mail No. EV622659082US
Docket No.: 418268889US
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Leonard A. Collins

Application No.: 09/955,525

Confirmation No.: 8577

Filed: September 18, 2001

Art Unit: 2144

For: METHODS AND SYSTEMS FOR
ENABLING OUTSIDE-INITIATED TRAFFIC
FLOWS THROUGH A NETWORK
ADDRESS TRANSLATOR

Examiner: P. A. Shaw

DECLARATION OF PRIOR INVENTION
(37 CFR 1.131)

1. I, Leonard Alan Collins, am the inventor of the invention described in U.S. Patent Application No. 09/955,525 entitled "Methods and Systems for Enabling Outside-Initiated Traffic Flows Through a Network Address Translator" and filed on September 18, 2001 ("the pending application").

2. I conceived of the invention that is currently claimed in the pending application prior to July 18, 2001.

3. On or before April 24, 2001, I attended a meeting with John Bretscher, patent counsel tasked with preparing the specification for the pending application. The Appendix contains a redacted Invention Disclosure Summary prepared by John Bretscher and dated April 24, 2001. The summary describes concepts disclosed at the meeting. The Appendix also contains copies of redacted electronic mail messages referenced in this declaration.

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4. On June 1, 2001, the first draft of the specification was sent to me via electronic mail.

5. On June 5, 2001, I provided comments on the first draft to patent counsel via electronic mail message.

6. Between June 8, 2001 and June 28, 2001, I exchanged several electronic mail messages with patent counsel to discuss the first draft. I also scheduled a meeting with patent counsel for July 20, 2001.

7. On July 20, 2001 I attended a meeting to discuss this invention with patent counsel.

8. On August 10, 2001, I received a second draft of the specification via electronic mail message.

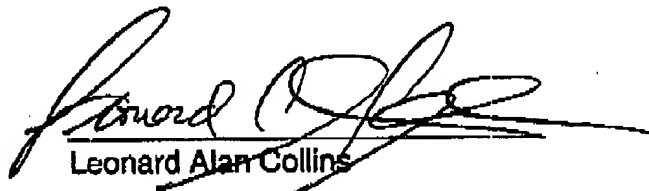
9. On August 27, 2001, I provided comments on the second draft via electronic mail message.

10. On August 28, 2001 I received a third draft of the specification via electronic mail message.

11. On September 7, 2001, I received the final version of the specification along with a declaration via electronic mail message.

12. On September 17, 2001, I signed the declaration.

13. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.


Leonard Alan Collins

6/21/2005
Date



Appendix

CONFIDENTIAL INVENTION DISCLOSURE SUMMARY

To: Microsoft Patent Group Docketing Department

From:

Date: April 24, 2001

Re: "Methods and Systems for Enabling Outside-Initiated Traffic Flows Through a NAT"

3. Inventors

L. Alan Collins

4. Summary of the Invention

Background

Description

The invention addresses the above problems without changing the NAT in any way. When a privately addressed computer behind a NAT wishes to accept a traffic stream initiated by a remote computer outside the NAT, the computer behind the NAT addresses a message to the remote computer and sends it. As the message passes through the NAT, the NAT creates the mapping between the private computer and the remote computer, just as it normally would. The trick is that this message is not part of a message stream: the private computer is not initiating a traffic stream to the remote computer. The purpose of the message is simply to induce the NAT to create the mapping. The contents of the message are entirely unimportant and it makes no difference at all if the message is ever delivered. As a matter of fact, if the remote computer is actually behind its own NAT, then the message will not be delivered but will instead be discarded by the receiving NAT.

Because the invention does not require the NAT to change at all, it is distinguished from other approaches that involve setting up signaling directly to the NAT.

Most applications behind a NAT are not aware of the NAT's presence. This is not a problem with the invention as applications can always send a NULL message to the remote computer. If the sender is behind a NAT, then this message induces the NAT to set up the mapping. If the sender is not behind a NAT, the message is of no consequence. In one embodiment, each communicating peer practices the invention by sending a NULL message to the other. Whichever message is sent first sets up the sender's mapping and is then discarded by the recipient. Because the mapping is now set up, the message sent second actually arrives at its destination but is discarded because its contents are meaningless to the application.

There must be some way for an application practicing this invention to know a priori that it wishes to accept a traffic stream initiated by a remote computer. This is accomplished by a "signaling channel" that can take any of numerous forms. The users of the two computers can speak to one another on the telephone and agree to send the initial messages. Alternatively, the two computers can communicate with a directory service. The service records details of which computers are willing to communicate with which others and transmits that information to the computers. With that information in hand, each computer can selectively induce the NAT mapping by sending a message to the other.

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From:

Sent:

Friday, June 01, 2001 1:35 PM

To:

L. Alan Collins

Cc:

Subject:

Network Address Translator"

"Enabling Outside-Initiated Traffic Flows Through a



Application.doc



Figure 4.vsd



Figures 1-3, 5.vsd

Hi

Attached below is the first draft application for the above matter,

From: L. Alan Collins [alanco@microsoft.com]
Sent: Tuesday, June 05, 2001 3:27 PM
To:
Cc:

Subject: Network Address Translator" "Enabling Outside-Initiated Traffic Flows Through a



NAT Patent lawyer
writeup.doc

Attached is my marked-up copy of the Word doc. I have no edits for the Visio diagrams. A few comments:

This Page Blank (uspto)

From:
Sent: Friday, June 08, 2001 2:57 PM
To: 'L. Alan Collins';
Cc:
Subject: Network Address Translator"; "Enabling Outside-Initiated Traffic Flows Through a

Dear Alan:

Your mark-up was very useful. I've incorporated your comments about the application as it exists to date.

This Page Blank (uspto)

Olson, Matthew

From: L. Alan Collins [alanco@microsoft.com]
Sent: Monday, June 11, 2001 11:49 AM
To: Bretscher, John; Virginia Coggan (LCA)
Cc: Julie Lengkeek (LCA); Matthew Olson (Leydig Voit & Mayer); Dr
Subject: RE: MS 171328.1; LVM 210817; Collins; "Enabling Outside-Init
Network Address Translator"

What I would like to do from my end is the following, if possible...

or whoever will do the write up, then review on paper after the
initial write up is complete.

For #3 below: Do this at the same time as #2 above.

Thanks --AlanCo

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From:
Sent: Monday, June 11, 2001 12:45 PM
To: L. Alan Collins;
Cc:
Subject: "Network Address Translator" Enabling Outside-Initiated Traffic Flows Through a

Hi Alan,

is sick today, but she'll probably be back tomorrow.

In addressing issues #2 and #3, we can schedule a video teleconference between you, our outside counsel, and our patent team sometime in the next couple of weeks

Please let me know if this will work for you.

Thanks!

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From: L. Alan Collins [alanco@microsoft.com]
Sent: Monday, June 25, 2001 3:23 PM
To:
Cc:
Subject: -- "Enabling Outside-Initiated Traffic Flows Through a
Network Address Translator"

We should go ahead with the PAT meeting. I'd prefer face-to-face, but if that's too expensive due to remote parties, then let's try a video conference.

Thanks --AlanCo

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This Page Blank (uspio)

From: L. Alan Collins [alanco@microsoft.com]
Sent: Thursday, June 28, 2001 1:32 PM
To:
Cc:
Subject: "Enabling Outside-Initiated Traffic Flows Through a Network Address Translator"

Either of these dates would work great for me. --AlanCo

-----Original Message-----

From:
Sent: Wednesday, June 27, 2001 7:18 PM
To:
Cc: L. Alan Collins;

Subject: RE: Enabling
Outside-Initiated Traffic Flows Through a Network Address Translator"

I'll try to schedule this meeting for July 19th or 20th since you'll be out here taking other disclosures. Thanks.

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From: Friday, August 10, 2001 1:20 PM
Sent: 'alanco@microsoft.com'
To:
Cc:
Subject: "Enabling Outside-Initiated Traffic Flows Through a Network Address Translator"

Dear Alan:

Please review the enclosed revised application. I believe it covers everything we discussed,



Application.doc



Figures 1-3, 5.vsd



Figure 4.vsd

From: L. Alan Collins [alanco@microsoft.com]
Sent: Monday, August 27, 2001 7:11 PM
To:
Cc:

Subject: "Enabling Outside-Initiated Traffic Flows Through a Network Address Translator"



Application.doc

Attached are my comments--which are few in number. This is looking very good from my perspective.

-AlanCo

From:
Sent: Tuesday, August 28, 2001 5:15 PM
To: 'L. Alan Collins'
Cc:
Subject: "Enabling Outside-Initiated Traffic Flows Through a Network Address Translator"



Application.doc



Figures 1-3, 5,
6.vsd



Figure 4.vsd

Dear Alan:

Thank you for your careful review. I've incorporated your comments with the following two exceptions:

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From: -
Sent: Friday, September 07, 2001 3:51 PM
To: 'alanco@microsoft.com'
Cc:

Subject: "Enabling Outside-Initiated Traffic Flows Through a
Network Address Translator"

Dear

Attached with the Final Draft are two forms that must be signed by you for the above-identified patent application. With a copy of this email, I sending you hard copies of the forms. Each of the hard copies must be signed and returned to me for filing with the Patent Office.

The attached forms are a "Combined Declaration and Power of Attorney" and an "Assignment."



Application.doc



Figure 4.vsd



Figures 1-3, 5,
6.vsd



210817.Declaration
& Power.090...



210817.MS
Assignment (multiple.

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